(No Model.)

S. T. F. STERICK.

JOURNAL BOX.

No. 496,174. Patented Apr. 25, 1893.

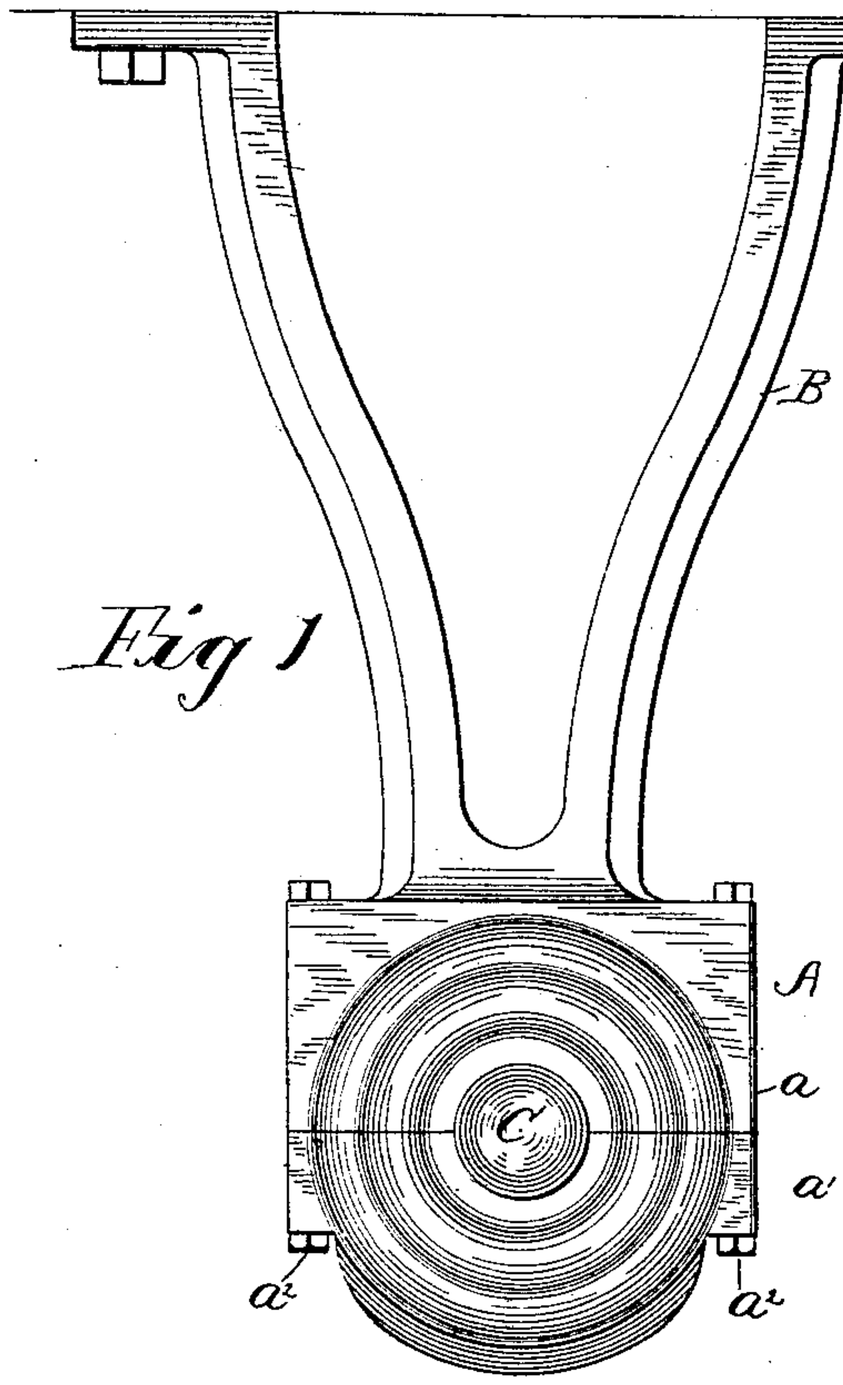


Fig 1

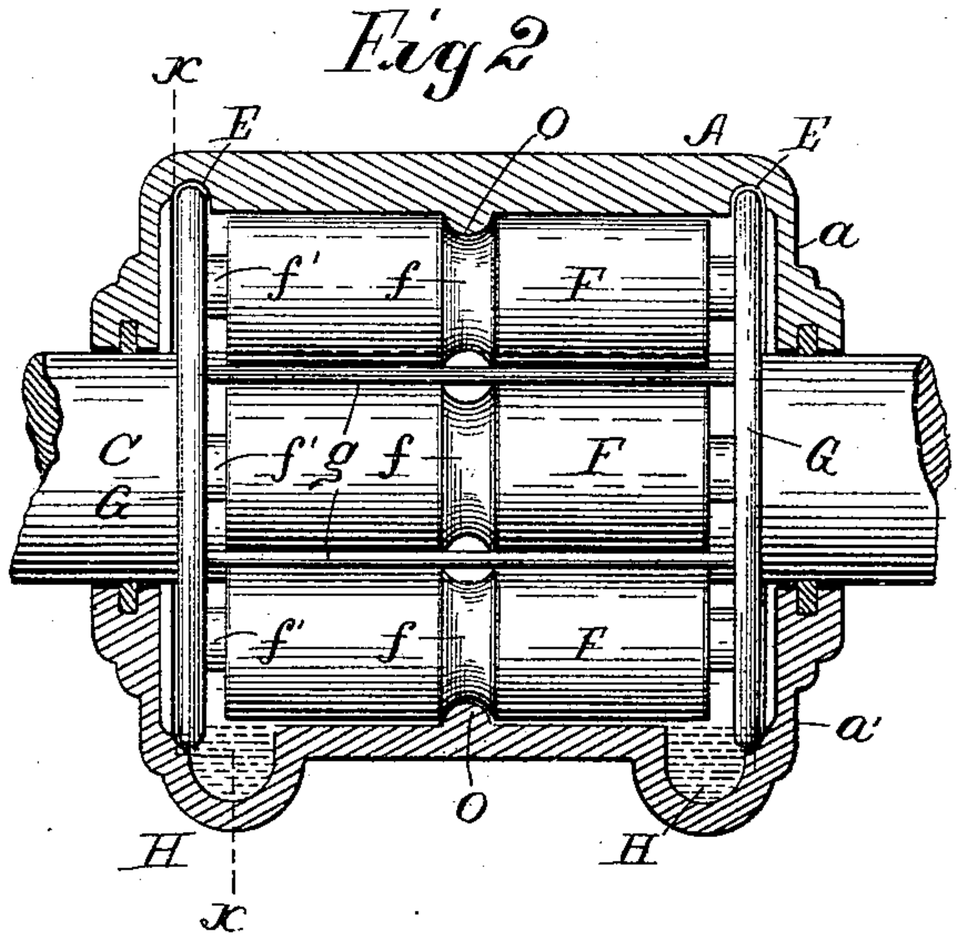
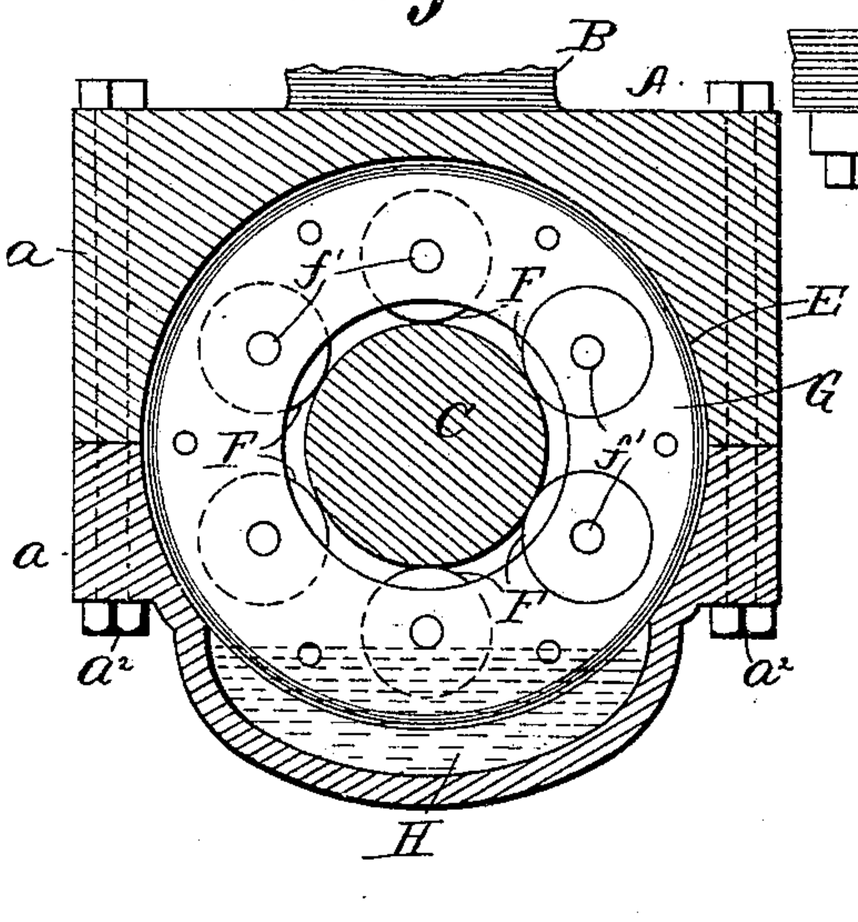
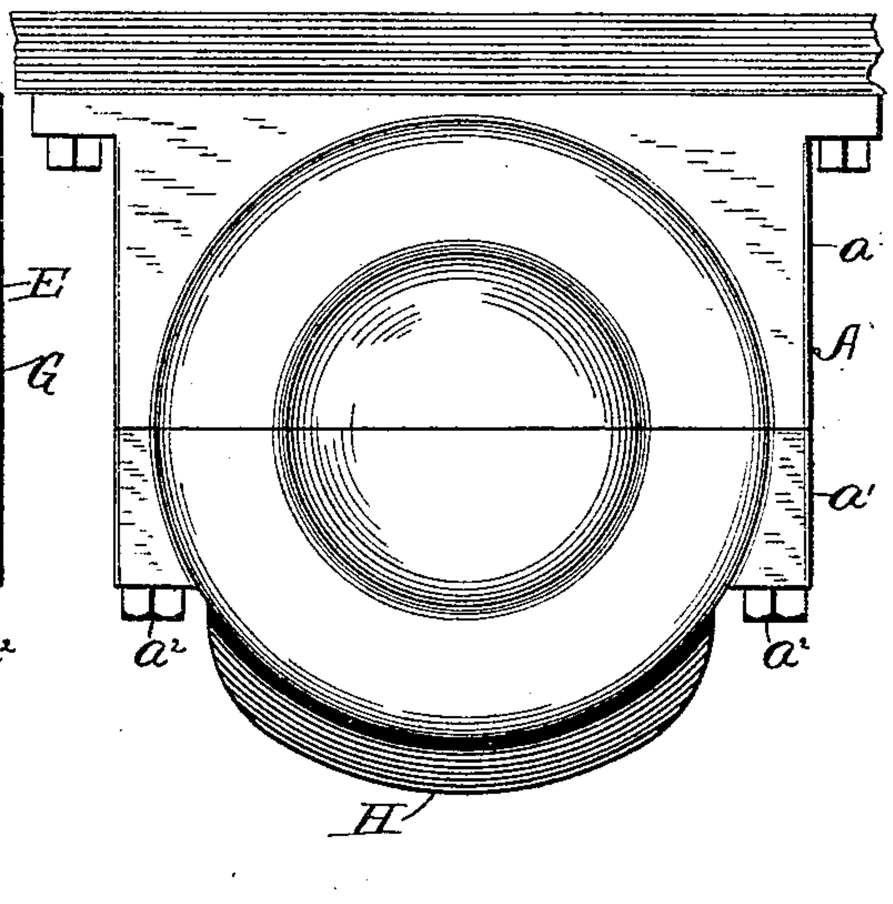


Fig 2

Fig 3

Fig 4





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UNITED STATES PATENT OFFICE.

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JOURNAL-BOX.

SPECIFICATION forming part of Letters Patent No. 496,174, dated April 25, 1893.

Application filed January 5, 1893. Serial No. 457,371. (No model.)

To all whom it may concern:

Be it known that I, SYLVESTER T. F. STERICK, a citizen of the United States, residing at Gaithersburg, in the county of Montgomery and State of Maryland, have invented certain new and useful Improvements in Journal-Boxes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in journal boxes and it consists in the construction and arrangement of parts hereinafter described and definitely pointed out in the claim.

The aim and purpose of the invention is the provision of an improved journal box and roller bearing having in connection therewith suitable means for lubricating the bearings and collecting the scale and other foreign matter. I attain these objects by the construction illustrated in the accompanying drawings wherein like letters of reference indicate like parts in the several views and in which—

Figure 1 is a front view of the box. Fig. 2 is a longitudinal section thereof showing the rollers in elevation. Fig. 3 is a cross section through the line *x x* of Fig. 2 and Fig. 4 is an elevation of a modified form.

In the drawings A represents the box having the hangers B, and C represents the shaft or axle. The box A is divided into two sections *a a'* which are united by the bolts a^2 passing through apertures at the corners of the box, other forms of uniting the sections may however be employed. On the inner face of the box at its center is an inwardly projecting rib O, having the usual curved or rounded edge. The opposite ends of the box are formed with annular grooves E, extending into the same to points below the plane of the bearing face of the box, which is located between the grooves and rib.

F are the rollers having the usual groove *f* at their centers in which the rib O engages. The journals *f'* of the roller are placed in suitable bearings formed in the spacing rings G. Heretofore in boxes of this nature it has been found that the end play of the rollers is practically prevented by the central rib which works in the grooves formed in the rollers and the spacing rings are required to be secured in position by the cross bolts or rods, which are designated in the accompanying drawings at *g*. A cage is thus formed which owing to the mounting of the rollers in the rings, has a tendency to slightly move longitudinally and thereby at times cause the cage to twist carrying the rollers out of alignment with the shaft. To overcome this objection, I form the grooves E in the box, and construct the rings so that their peripheries will extend into the grooves beyond the rollers, the width of the rings being slightly smaller than that of the grooves so that they may move freely therein during rotation but all wabbling or side play is prevented. The cage is thereby held in perfect alignment and the rollers always held parallel with the shaft.

To provide means for thoroughly lubricating the bearings of the rolls and the peripheries of the rings I form at the opposite ends of the box in the under section, oil pockets H. These pockets occupy positions adjacent to the peripheries of the rings their inner walls terminating directly below the rolls and their outer walls terminating at points central of the grooves E, the inner walls of the grooves at these points being omitted, the rings moving partly in the grooves and partly in the oil pockets, thereby forming feeders which carry the oil, with which they contact, to the bearings. These pockets also serve to receive the scale or sediment caused by wear, accumulated dust, &c., thereby relieving the rollers of such wearing material.

In supplying the oil the sections may be separated or suitable filling vents may be formed in the walls of the box.

In Fig. 4 I have shown the box applied to railway car axles in which case one end would necessarily be closed.

I am aware that minor changes in the construction and arrangement of the parts can be made and substituted for those herein shown and described without departing from the nature and principle of my invention.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

A roller bearing consisting of a box having annular grooves at its opposite ends, a central inwardly extending rib, and oil pockets formed in the lower portion thereof at opposite ends, with which the grooves communicate, a series of rollers having central peripheral grooves, rings, working in the annular groove of the box and pockets and in which the rollers are journaled and rods entering the rings at points between the rolls, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

SYLVESTER T. F. STERICK.

Witnesses:
JOSEPH W. BUELL,
L. S. BACON.